

Oral Session:

Effects of Hydroxychloroquine with or without Azithromycin on SARS-CoV-2 Clearance in COVID-19 Patients, Taiwan, March–June 2020

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Background:

Hydroxychloroquine (HCQ) with or without azithromycin (AZI) was found to have antiviral activities against SARS-CoV-2 in vitro. In Taiwan, all COVID-19 patients are hospitalized till viral clearance. We evaluated the effects of these drugs on shortening the time to viral clearance in COVID-19 patients.

Methods:

We conducted a retrospective cohort study among all laboratory-confirmed COVID-19 patients confirmed during March–June 2020 in Taiwan. Demographic, clinical, epidemiological and laboratory data were extracted from case review forms and the National Notifiable Disease System. Disease severity of patients was determined following WHO guidance. Patients were classified into: hydroxychloroquine alone (HCQ), hydroxychloroquine with azithromycin (HCQ+AZI), and neither. Outcome was days from symptom onset to viral clearance as determined by first RT-PCR negativity on two or three consecutive negative swabs. We compared the outcomes between the three treatment groups using survival analysis with Kaplan-Meier estimates.

Results:

Of the 353 patients included (median age 30 years, 52% men): 117 (33%) received HCQ, 137 (39%) received HCQ+AZI, and 99 (28%) received neither. Among 353 patients, 331 (94%) had mild to moderate disease; disease severity did not differ between treatment groups. All patients achieved viral clearance, with median of 24 days (IQR 18-34) from symptom onset. One patient in HCQ+AZI group died 52 days after disease onset (18 days after viral clearance) from complications. Compared to other groups, patients in HCQ group had a shorter time to viral clearance (median: HCQ: 23 days, HCQ+AZI: 25 days, neither drug: 25 days, $P = .50$). The probability of viral clearance at 30 days was 66% in HCQ group, 67% in HCQ+AZI group, and 69% in neither ($P = .61$).

Conclusions:

Among COVID-19 patients in Taiwan, the use of hydroxychloroquine, alone or with azithromycin, did not shorten time to viral clearance. This result does not support recommending the use of these drugs in COVID-19.